Massachusetts Institute of Technology
Department of Economics
Working Paper Series

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Working Paper 03-39
July 2003

Room E52-251
50 Memorial Drive
Cambridge, MA 02142

Kleptocracy and Divide-and-Rule: A Model of Personal Rule*

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July 2003

Abstract

Many developing countries have suffered under the personal rule of "kleptocrats", who implement highly inefficient economic policies, expropriate the wealth of their citizens, and use the proceeds for their own glorification or consumption. We argue that the success of kleptocrats rests, in part, on their ability to use a "divide-and-rule" strategy, made possible by weakness of the institutions in these societies. Members of society need to co-operate in order to depose a kleptocrat, yet such cooperation may be defused by imposing punitive rates of taxation on any citizen who proposes such a move, and redistributing the benefits to those who need to agree to it. Thus the collective action problem can be intensified by threats which remain off the equilibrium path. In equilibrium, all are exploited and no one challenges the kleptocrat. Kleptocratic policies are more likely when foreign aid and rents from natural resources provide rulers with substantial resources to buy off opponents; when opposition groups are shortsighted; when the average productivity in the economy is low; and when there is greater inequality between producer groups (because more productive groups are more difficult to buy off).

JEL Classification: O12, H00.

Keywords: dictatorship, divide-and-rule, economic development, institutions, kleptocracy, personal rule, political economy.

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*Paper presented as the *Marshall Lecture* at the European Economic Association's Annual meetings in Stockholm, August, 24th, 2003. We thank Silje Aslaksen for pointing out an algebraic mistake in the first version and Alexander Debs for excellent research assistance.

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1 Introduction

Many countries in Africa and the Caribbean suffer under "kleptocratic" regimes, where the state is controlled and run for the benefit of an individual, or a small group, who use their power to transfer a large fraction of society's resources to themselves. Examples of kleptocratic regimes include the Democratic Republic of the Congo (Zaire) under Mobutu Sese Seko, the Dominican Republic under Rafael Trujillo, Haiti under the Duvaliers, Nicaragua under the Somozas, Uganda under Idi Amin, Liberia under Charles Taylor, and the Philippines under Ferdinand Marcos. In all these cases, kleptocratic regimes appear to have been disastrous for economic performance and caused the impoverishment of the citizens.

A study of the political economy of such regimes must depart from the standard presumptions of most research in economics and political science, which assume that rulers make choices within "strongly-institutionalized polities".[1] In these polities, formal political institutions, such as the constitution, the structure of the legislature, or electoral rules, place constraints on the behavior of politicians and political elites, and directly influence political outcomes. In contrast, kleptocracy emerges in "weakly-institutionalized polities," where formal institutions neither place significant restrictions on politicians' actions nor make them accountable to citizens.

While the academic study of strongly-institutionalized polities is well advanced (e.g. Shepsle and Weingast, 1995, Cox, 1997, Persson and Tabellini, 2000, 2003), there are few studies, and less of a consensus, on the nature of weakly-institutionalized polities. What determines corruption, rent extraction and bad policies when institutions are weak? Indeed, the qualitative nature of politics appears to differ markedly between strongly and weakly-institutionalized polities: when institutions are strong, citizens punish politicians by voting them out of power; when institutions are weak, politicians punish citizens who fail to support them. When institutions are strong, politicians vie for the support and endorsement of interest groups; when institutions are weak, politicians create and control interest groups. When institutions are strong, citizens demand rights; when institutions are weak, citizens beg for favors.

The research program proposed in this paper is a systematic study of policymaking in weakly-institutionalized societies, and ultimately, a study of the process via which

[1] We owe this terminology and the distinction between strongly- and weakly-institutionalized polities to Robert Powell.

strongly-institutionalized societies emerge (see North and Weingast, 1989, for a classic account of such a process). To take a first step in this program, we construct a model to study kleptocratic politics. Perhaps the most puzzling feature of kleptocracies, illustrated by the examples from the Congo, the Dominican Republic, Nicaragua or Haiti, is their longevity, despite the disastrous policies pursued by the rulers.[2] This longevity is made even more paradoxical by the fact that such regimes apparently lacked a political base (a core constituency) that supported them. Despite the absence of formal institutional mechanisms for deposing unpopular rulers, constraints on the behavior of rulers exist even in weakly-institutionalized societies (e.g., the threat of revolution, or competition from other strongmen). Why do, then, the heavily-taxed producers or the poverty-stricken citizens not replace the kleptocrat? Why do they rarely form an effective opposition constraining the kleptocrat? How can a regime that apparently benefits nobody outside of the narrowest of cliques survive? Our basic answer is that this is because the absence of strong institutions allows rulers to adopt political strategies which are highly effective at defusing any opposition to their regime.

The seminal book by Robert Bates, *Markets and States in Tropical Africa*, provides many clues towards an answer. Bates described the web of inefficient transfers and policies in effect in many parts of Africa, but most notably in Ghana and Zambia, and suggested the following logic: many of these inefficient policies are in place to transfer resources from the population to the ruling groups, while at the same time ensuring their political survival. In particular, the nexus of inefficient policies appeared to be useful for creating an environment where any group that became politically mobilized against the rulers could be punished, while those that remained loyal were rewarded. With this logic, the Ghanaian government heavily taxed cocoa producers, while at the same time subsidizing their inputs of seeds and fertilizers. The subsidies could be allocated selectively as a potential reward for not attempting to change the status quo. Similarly, the exchange rate was kept overvalued because then the government could allocate or withhold valuable rations of foreign exchange in order to guarantee support.

In this paper, we suggest a generalization of this reasoning, which we dub the "divide-and-rule" strategy. Divide-and-rule is a method used by kleptocrats to maintain power in weakly-institutionalized polities while simultaneously pursuing policies costly to society. The logic of the divide-and-rule strategy is to enable a ruler to bribe politically pivotal

[2]Despite the appealing intuition, perhaps derived from many political analyses of strongly-institutionalized societies, that rulers who reduce the utility of citizens ought to be replaced, this appears not to be the case in weakly-institutionalized societies. Many kleptocrats rule for long periods, Mobutu for 32 years, Trujillo for 31, and the Somozas for 42 years.

groups off the equilibrium path, ensuring that he can remain in power against challenges. To remove a ruler from power requires the cooperation of distinct social groups which is made difficult by the collective action problem (Olson, 1965). By providing selective incentives and punishments, the divide-and-rule strategy exploits the fragility of social cooperation: when faced with the threat of being ousted, the kleptocratic ruler intensifies the collective action problem and destroys the coalition against him by bribing the pivotal groups.

More explicitly, we consider a dynamic game between the ruler and two producer groups. The kleptocratic ruler taxes production and uses the ensuing tax revenue, the rents from natural resources and potential foreign aid from outside donors for his own consumption. The two producer groups, if they can cooperate, can remove the ruler from power and establish democracy (a regime more favorable to their interests). We model this cooperation as follows: one of the two groups (the "proposer") makes a proposal to remove the ruler from power, and if the other group (the "proposed") agrees, the ruler is removed and democracy is established. The ruler-friendly political institutions, however, imply that before the proposed group responds to the proposal, the ruler can make a counteroffer. This counteroffer enables him to use a divide-and-rule strategy: following a challenge, the ruler uses all his resources and the tax revenues to bribe the proposed group (and compensate them for future higher taxes if they turn down the proposal and keep the ruler in power). If he can do so successfully, he can fight off the challenge, and anticipating this, no group will challenge the ruler. Therefore, the divide-and-rule strategy remains off the equilibrium path, and its anticipation implies that the ruler can follow highly distortionary (kleptocratic) policies without being challenged. Not only is the kleptocrat able to stay in power, but the threat of divide-and-rule implies that there will be no challenges to remove him from power along the equilibrium path.[3]

In addition to providing an answer to the question of how kleptocratic regimes survive and formalizing the idea of divide-and-rule, the model also implies a number of interesting comparative static results. These results stem not from varying the formal political institutions, but from differences in the feasibility of divide-and-rule depends on the socio-economic environment. In particular, they follow directly from the logic of divide-and-rule: kleptocracy survives if, off the equilibrium path, it can successfully bribe the pivotal group. Consequently, kleptocracy is more likely: (a) when producer groups

[3]We conjecture that these results extend to an environment with uncertainty, where, along the lines of the analysis in Green and Porter (1984) and Abreu, Pearce and Stacchetti (1990), punishment will sometimes occur along the equilibrium path. Obviously, most of the examples in the case study literature feature situations where divide-and-rule is actually observed in practice.

or their political representatives are more shortsighted, because they put less weight on future returns under democracy; (b) when there is more foreign aid to the ruler, which he can use to bribe pivotal groups; (c) when there are greater natural resource rents that can be used to bribe pivotal groups;[4] (d) when average productivity in the economy is low (loosely speaking, because this makes natural resource rents and funds from foreign aid more effective instruments to bribe the pivotal group);[5] (e) when there is less inequality between producer groups. This is because the main challenge to the ruler comes from the more productive group, which has more to gain from democracy. If inequality increases, it becomes more difficult for the ruler to sustain his kleptocratic policies.

These comparative static results are useful in thinking about the experiences of a number of African and Caribbean countries. First, kleptocratic regimes seem to be more common in natural-resource-rich countries such as the Congo, Liberia, Sierra Leone, and Nigeria, which is consistent with our result that, as long as producer groups are not too patient, greater natural resource rents facilitate kleptocracy. For example, Ross (2001) shows that, other things equal, the presence of oil increases the probability that a country will be a dictatorship.[6]

Second, many accounts of the worst kleptocracies also illustrate how the ruler was able to use foreign aid (as well as rents from natural resources) to stay in power and fight off challenges. The case of Mobutu, which we discuss in the next section, is especially pertinent here. This negative role of foreign aid on equilibrium policies might also explain the common finding in the empirical growth literature that foreign aid seems to have little positive effect on the rate of economic growth in less developed countries, and in fact, it might even have a negative effect on non-democracies (e.g., Burnside and Dollar, 2000, Easterly, Levine and Roodman, 2003). In addition there is a large amount of anecdotal evidence (e.g., Dollar and Pritchett, 1998, Brautigam, 2000, Easterly, 2001, van der Walle,

[4] However, this result requires producer groups not to be too patient. Otherwise, the prospect of obtaining some of those natural resource rents in the future, once the ruler is deposed, may make it sufficiently attractive to oust the ruler, making kleptocratic policies harder to sustain.

[5] However, as with the comparative static with respect to natural resource rents, the effect of average productivity on policies depends on the discount rate of the citizens: if citizens are very impatient, greater average productivity may make kleptocracy more likely.

[6] Moreover, the case study evidence also suggests that whether or not resources are a curse depends crucially on institutions (see Ross, 1999, for a survey). Similarly, Moene, Mehlum and Torvik (2001) show that the negative effects of resources pointed out by Sachs and Warner (1995) are conditional on institutions—only countries with poor institutions, specifically weak constraints on the executive, suffer a resource curse. In our model this follows from the fact that once political institutions do not constrain rulers, natural resources help to facilitate divide-and-rule (in this context, see also Robinson, Torvik and Verdier, 2002, for a related argument that when institutions are weak, resource booms are a curse because they intensify incentives for regimes to use inefficient forms of redistribution to stay in power).

2001), and some tentative econometric evidence (Knack, 2000) that foreign aid leads to worse governance.

The comparative static result with respect to inequality is also interesting. One interpretation of this result is that kleptocracy is less likely to arise when there is a balance of power between the ruler and a powerful producer group in society. This is consistent with the experiences of a number of more successful economies in sub-Saharan Africa, such as Botswana and Mauritius, which have both managed to become stable democracies and refrain from the most distortionary policies. A possible explanation is the political power of major producer groups, such as the cattleowners in Botswana and the sugar planters in Mauritius, which has placed real constraints on the behavior of political elites (see, for example, Leith, 2000, and Acemoglu, Johnson Robinson, 2003, on Botswana and Bowman, 1991, on Mauritius). Our result is also consistent with Bates' emphasis that economic policies were less distortionary in Kenya than in Ghana, because large landowners in Kenya were better able to solve the collective action problem and act as an important force in politics. The interpretation suggested by our model is that, in Kenya, the presence of a social class with sufficient wealth and power (thus greater inequality among producers) counterbalanced the power of the ruling party KANU (Kenya African National Union) under Jomo Kenyatta.[7]

In addition to these comparative static results, we should emphasize that kleptocratic rule can be sustained because of two features of our political game: (1) the ability of the ruler to make a counteroffer after the proposal of one of the groups; (2) the ability of the ruler to charge different tax rates and make differential transfers to the two groups. The first feature is plausible in a weakly-institutionalized society where politicians can exploit their power to consolidate their rule. The second feature is also plausible in the context of many less developed countries where ethnic, geographic and economic divisions enable policies with very different distributional consequences for various groups to be implemented. In the next section, we provide a brief discussion of how these divisions were important in the survival of some kleptocratic regimes.

This paper is related to a number of different literatures. As we noted, weakly-institutionalized polities have received little attention by political economists. For instance, the political economy literature on dictatorships is very underdeveloped. Most models are similar to ours in that they formalize dictatorship as the maximization of an individual's or group's utility function subject to the constraint of staying in power (e.g.

[7] In this context, it is also interesting that in the most extreme examples of kleptocracy in the Americas, the Dominican Republic, Haiti and Nicaragua, revolution and U.S. intervention destroyed traditional elites that might have blocked the power of kleptocrats.

North, 1981, Levi, 1988, Grossman, 1991, Grossman and Noh, 1994, McGuire and Olson, 1996, Robinson, 1998, Wintrobe, 1998, Acemoglu and Robinson, 2000b, La Ferrara and Bates, 2001, Bueno de Mesquita et al., 2003, Acemoglu, 2003).[8] However, these models do not capture the notion that the nature of politics under weak institutions is different than in strongly-institutionalized polities. Our model develops this idea and shows how this can lead to the divide-and-rule strategy in weakly-institutionalized societies, and how divide-and-rule leads to very different comparative static results.

Political scientists often distinguish between different types of "autocracies" or dictatorships. For example, the seminal study of Linz and Stepan (1996) posits the existence of four types, totalitarian, post-totalitarian, authoritarian and sultanistic. Sultanism, which is close to what we mean by kleptocracy, is also equivalent to other concepts used by political scientists. Scholars working in African politics, for instance, refer to this as "neopatrimonialism", "personal rule", or "prebendalism". In the words of Bratton and van der Walle (1997, p. 62): "the right to rule in neopatrimonial regimes is ascribed to a person rather than to an office, despite the official existence of a written constitution. One individual ... often a president for life, dominates the state apparatus and stands above its laws. Relationships of loyalty and dependence pervade a formal political and administrative system, and officials occupy bureaucratic positions less to perform public service ... than to acquire personal wealth and status. Although state functionaries receive an official salary, they also enjoy access to various forms of illicit rents, prebends, and petty corruption, which constitute ... an entitlement of office. The chief executive and his inner circle undermine the effectiveness of the nominally modern state administration by using it for systematic patronage and clientelist practices in order to maintain political order." That such neopatrimonialism is at the heart of Africa's economic crisis is the conventional wisdom in political science (see Sandbrook, 1985, Herbst, 2000, Bates, 2001). Jackson and Rosberg (1982, pp.17-19) note that personal rule is "a system of relations linking rulers ... with patrons, clients, supporters, and rivals, who constitute the 'system.' If personal rulers are restrained, it is by the limits of their personal authority and power and by the authority and power of patrons, associates, clients, supporters, and—of course—rivals. The systems is 'structured' ... not by institutions, but by the politicians themselves."

[8] There are interesting comparative static results from the literature on dictatorships. Existing ideas suggest that better economic policies are chosen by dictators with long time horizons (Levi, 1988, Grossman and Noh, 1994), who are "encompassing" in the sense that a large fraction of income accrues to them (McGuire and Olson, 1996), who do not fear losing their political power (Robinson, 1998, Acemoglu and Robinson, 2000b), or who have to gain the support of a large "winning coalition" (Bueno de Mesquita et al., 2003). See also Acemoglu and Robinson (2000b, 2004) for a framework to analyze transitions from dictatorship to democracy.

Our contribution to this literature is to provide a formal model of kleptocracy (personal rule), to systematically investigate how a divide-and-rule strategy supports kleptocracies, and to develop a number of comparative static results on the likelihood of kleptocratic regimes and policies. These are all prerequisites to a full understanding of politics in weakly-institutionalized societies.

The rest of the paper is organized as follows. In the next section, we briefly discuss the experiences of two countries under kleptocratic regimes, with special emphasis on how these regimes were sustained. Section 3 presents a model that formalizes the main ideas discussed above and derives the main comparative static results. Section 4 concludes.

2 The Kleptocratic Experience: Two Case Studies

In this section we briefly discuss two classic kleptocracies. The rule of Mobutu Sese Seko in the Democratic Republic of the Congo from 1965 to 1997 and the rule of Rafael Trujillo in the Dominican Republic from 1930 to 1961. Our discussion emphasizes several characteristic features of these regimes. First, both rulers were true kleptocrats in that their prime aim was to accumulate personal wealth for themselves and their families. Second, neither regime, despite their longevity, had an extensive base of support in society. Third, each ruler maintained control of power by manipulating people and groups along the lines of divide-and-rule. Finally, the grip on power of both rulers was greatly facilitated by the nature of society, natural resource rents and foreign aid.

2.1 Mobutu Sese Seko and *Le Mal Zairois*

Joseph Mobutu seized power in the Congo, which became independent from Belgium in 1960, in a military coup in 1965 and quickly established himself as a dictator at the head of a one-party state, the MPR (Mouvement Populaire de la Révolution). There is no doubt that the aim of Mobutu was to use the state for the enrichment of himself and his family. He was a true kleptocrat. In the 1970s, 15-20 percent of the operating budget of the state went directly to Mobutu. In 1977 Mobutu's family took $71 million from the National Bank for personal use and by the early 1980s his personal fortune was estimated at $5 billion (Leslie, 1987, p. 72). Turner and Young (1985, pp. 178-183) devote six pages to listing Mobutu's assets and wealth.

The social base of the Mobutu regime was very narrow. Mobutu himself came from a small ethnic group, the Ngbandi, in the Équateur province and there is some evidence of systematic favoritism towards fellow Équateurians especially towards the end of his regime. For example, in 1990 46% of the officer corp, 34% of diplomats and 19% of

the MPR Central Committee were from Équateur. Nevertheless, it was relatively few who constituted the base of support. These people, called by Zairians *les gros légumes* or *les barons du regime* constituted "an inner core of persons with especially close kinship, ethnoregional, or personal ties to the president; variously known as the 'presidential brotherhood' or the 'untouchables,' they were able to conduct their mercantile affairs in blatant disregard for normal legal regulations." (Turner and Young, 1985, p. 398)

Mobutu used various strategies to maintain power, including the military and nationalist ideology, and most notably the philosophy of 'Mobutuism' after 1974. However, his most important strategy was similar to what we refer to as "divide-and-rule," creating an environment in which any person or group could be rewarded or punished selectively. For example, Leslie (1987, p. 70) describes this as: "Individuals in public office are totally dependent on him for selection and maintenance of power. By frequently rotating government posts, Mobutu manages to maintain uncertainty and vulnerability... He plays the role of big chief ... bestowing favors on his subjects based on personal discretion."

Turner and Young, in their seminal book on the Mobutu state, describe the same situation as follows: "Client office holders have been constantly reminded of the precariousness of tenure by the frequency of office rotation, which simultaneously fuels the hopes of those Zairians anxiously waiting just outside the portals of power. The MPR Political Bureau, for example, was revamped a dozen times in the first decade of party life. No one (except of course Mobutu) has been continuously a member, and only six persons have figured on as many as half of the membership lists... Insecurity has been sustained among top state and party personnel by the frequent application of sanctions. During the first decade of the Mobutu regime, 29 of the 212 leaders went directly from their posts to prison on either political or corruption charges. An additional 26 were removed on grounds of disloyalty or dishonesty, with penal sanctions... Frequently in presidential speeches reference is made to unnamed disloyal or corrupt persons in the leadership ranks... Cumulatively, these devices constitute a powerful mechanism of informal intimidation, and suggest why systematic opposition has never arisen within the top organs of the state." (1985, pp. 165-166). Later they continue (pp. 397-398): "As a co-optative resource, a pool of vacant high offices was sustained, ... the sanction for not cooperating ... was imprisonment on corruption, nepotism, or subversion charges, or exile. Access to high rank in all state agencies depended upon presidential favor." They sum up the essence of Mobutu's state as: "the shifting patterns of membership [of the Political Bureau] ... constituted the very essence of patrimonial politics." (p. 193).

Gould's analysis concurs when he notes that "the frequent cabinet shuffles and trans-

fers of officials from region to region ... may be explained as largely reflections of the president's skill at using people while they can provide assistance to him and at the same time keeping factions separated from each other, thus preventing autonomous power centers from developing." (1980, p. 83)

The career of Nguza Karl-i-Bond, who started as an opponent of Mobutu in the 1960s, illustrates the workings of divide-and-rule and the nature of shifting personal alliances. In the 1970s he was brought into the Mobutu camp and at one point became the foreign minister. In 1977 he was accused of treason and sentenced to death. In 1979 he was released and made prime minister. By 1981 he was in exile and gained fame by his book on the Mobutu regime (Karl-i-Bond, 1982). By 1985 he was back in favor, and became the ambassador to the United States (Leslie, 1987, p. 70-71). There are many other cases like this, for example Kamitatu-Massamba and Mbujimayi Belshika (see Gould, 1980, p. 83). Turner and Young (1985, p. 166) note in this context "though sanctions could be severe, a fall from grace was not necessarily permanent. Those jailed seldom remained in prison for very long. Repentance and renewed cultivation of the favor of the sovereign could make possible a return to full grace."

The impact of divide-and-rule was catastrophic for the efficiency of the bureaucracy and the state. Leslie (1987, p. 6) notes that in Mobutu's regime: "what is considered to be simply bureaucratic disorganization and economic mismanagement by external actors such as the [World] Bank and the IMF, is to Zaire's ruling elite a rational policy of 'organized disorganization' designed to maintain the status quo."

Added to this, the personal wealth accumulation of Mobutu and his clique destroyed much of the economy. The nationalization of foreign owned firms, most of which ended up in the hands of Mobutu and the regime, under the Zairianization program initiated in November 1973 was particularly disastrous, destroying what was left of the economy. According to Maddison (1995) GDP per-capita in 1992 was less than half of what it had been at independence in 1960.

What factors facilitated Mobutu's use of divide-and-rule? During the rule of Mobutu, the Congo was clearly very poor and characterized by low productivity, making it easy for him to buy off potential challengers. Moreover, the Congo is endowed with enormous natural resource wealth including 15% of the world's copper deposits, vast amounts of diamonds, zinc, gold, silver, oil and many other resources (Leslie, 1993, p. 3). This vast natural wealth gave Mobutu a constant flow of income to help sustain his power.

The Congo is also a huge and geographically diverse country (see Herbst, 2000, for an analysis of the "difficult geography" of the Congo) and many scholars have seen it

as having a uniquely complex cultural heritage. The common estimate is that there are about 200 distinct ethnic groups in the Congo (Leslie, 1993, p. 68) and Young (1965, p. 271) argued that "The particular colonial experience has worked to make ethnic loyalties in the Congo stronger and supra-tribal identification probably weaker than in most other African states." According to numbers reported in Easterly and Levine (1997), the Congo is the second most ethnically diverse country in the world after Tanzania. The fragmented nature of the country, combined with the impact of the Belgian colonial state, meant that there was no large group or socio-economic class that could offset the power of Mobutu and help obstruct his personal rule. As we noted in the Introduction, this is in stark contrast to Botswana and Mauritius where the existence of such classes placed checks on state power and limited the potential for kleptocracy. Moreover, the regional and ethnic identification of different groups made it straightforward for Mobutu to engage in the types of targeted redistribution and punishment emphasized in our model.

Finally, there is general consensus among scholars that foreign aid was a key factor enabling Mobutu to stay in power for so long. Leslie's analysis of the relationship between the Mobutu regime and foreign aid agencies suggests that aid and foreign financial support was crucial in propping up the regime. She notes (1987, p. 135) "the regime ... views aid agencies such as the [World] Bank and bilateral donors as sources of foreign exchange, not partners in development," and also emphasizes that Mobutu and his clique "sees development assistance as yet another means to accumulate personal wealth" (1987, p. 6). Mobutu made efforts to reform the regime and its economic policies only when "[the abysmal situation] undermined the confidence of Western governments and investors, and thus flows of foreign exchange, resources vital for Mobutu and his clique" (1987, p. 142).[9]

Thus the Mobutu regime is a classic example of how divide-and-rule can be used to sustain a regime with little, if any, popular support. One could ask why Mobutu, faced with ruling such a polity, could not simply sustain himself through repression, rather than resort to the relatively complex strategy we have outlined. One reason is that Mobutu always kept the military relatively weak because he could never be sure of its support. Divide-and-rule was used with respect to military officers as well as civilian political elites. When Mobutu needed effective military forces he relied instead on the Belgians and the French, who could not be expected to repress domestic opponents. The experience of the Congo during this awful era also illustrates the importance of the factors highlighted by the comparative statics of our model.

[9] The reforms were never properly implemented, however, because "[such] reforms strike at the heart of Mobutu's patrimonial system and will only serve to undermine patron-client networks, efforts to buy loyalty, and wealth seeking strategies" Leslie (1993, p. 123).

2.2 The Dominican Republic under Rafael Trujillo

The Dominican Republic, the eastern half of the island of Hispaniola, became independent from Spain in 1821. However, in 1822 it was invaded by Haiti, and regained its freedom only in 1844 after a war of independence. The Haitian occupation destroyed the traditional ruling elite of large landowners who fled the country never to return. In the subsequent decades, the country was plagued by serious political instability and a series of dictatorships. In 1916 the United States took over the country (previously, they had controlled the customs since 1906 to recover deliquent loans), an occupation that lasted until 1924. During this period the country was run by a military governor. To establish control of the country, the United States trained a domestic constabulary, which became the Nation Army after 1924. Trujillo became the head this constabulary in 1928 and in 1930 used it as a power base to help a coup against the government, after which he had himself elected President in a fraudulent election. Throughout his rule Trujillo carried out the facade of elections, regularly being re-elected by 100 percent of the vote and even on two instances, from 1938 to 1942 and from 1952 to 1961, stepping down from the Presidency and controlling power from behind the scenes.

As with Mobutu, there is no doubt about the kleptocratic tendencies of Trujillo. Indeed, relative to the size of the economy, Trujillo's regime was probably the most successful case of kleptocratic accumulation in history. By the end of his regime, the fortune of the Trujillo family was equal to about 100 percent of GDP at current prices and the family, "controlled almost 80% of the country's industrial production. About 60% of the country's labor force depended on him directly or indirectly, with 45% employed in his firms and another 15% working for the state" (Moya Pons, 1995, p. 398).

Trujillo used many tools to maintain power. He used coercion and force against potential rivals, and murdered and tortured many opponents. But as in the Congo, divide-and-rule was a key strategy. As a result, Hartlyn explains that "Trujillo eventually became the single dominant force in the country by combining abuse of state power, threats and co-optation. Although certain of the country's economic elite maintained some individual autonomy there was no possibility for independent organization" (1998, p. 99-100).[10]

How the Dominican version of divide-and-rule worked is explained in Turits (2003, p.

[10]Those who benefitted from the regime were few outside Trujillo's extended family. A 1953 New York Times article (quoted in Wiarda, 1968, p. 74) found that 153 relatives were employed by the government. Trujillo himself was minister of foreign relations, minister of social security, ambassador at large, and special ambassador to the United States. Family members held the presidency (his brother), two senatorial posts, six major diplomatic assignments, the positions of commander in chief of the armed forces, undersecretary of defense, chief of staff of the air force, inspector general of the army, inspector of embassies, plus a great number of other posts.

7): "Trujillo continually shuffled cabinet members and other important officials in and out of government posts to prevent their developing an independent power base. He exerted still tighter control over the national legislature. Upon assumption of office, members of the National Congress were obliged to sign their own resignations, a document that on Trujillo's order could be handed to them at any moment... In certain cases, these resignations were reportedly delivered to legislators in the middle of their speeches before the assembly. In the 1942 to 1947 period, for example, there were 32 resignations in a Senate of 19 members, and 139 resignations in a House composed of 42 deputies."

Wiarda's analysis is similar: "Trujillo's was a highly personalistic dictatorship in which power was not shared, even among a small clique, but concentrated in the hands of one man" (1968, p. 26). He further demonstrates that "Trujillo's principal method of controlling the governmental machinery was the constant shuffling and reshuffling of political officeholders. He had the constitutional authority ... to appoint and remove almost all government personnel and he used his power extensively. In addition, he kept a file of signed but updated resignations for all government employees, and officials frequently arrived at work only to learn that Trujillo had filled in the date and that they had 'resigned.' The technique of shuffling government personnel was employed for the same reason as Trujillo's frequent changing of the armed forces and police commands ... Anyone who gained a powerful position could expect to be replaced ... no potential opposition power centers were allowed to develop" (1968, p. 62). Wiarda continues:

> "Trujillo's technique was to fragment the power of the many and, correspondingly, to concentrate all authority in his own hands." (p. 62)

As in Zaire, people who were demoted, jailed or exiled were often pardoned and returned to positions of power (Wiarda, 1968, p. 63 and Crassweller, 1966, for many examples). Hartly (1998, p. 100) adds: "Politically, Trujillo combined guile, cynicism, ruthlessness and co-optation. There was ... incredible manipulation of individuals, who found themselves moved and removed from public office in complex and disconcerting fashion even as personal rivalries were promoted and tested."

Trujillo also employed the strategy of divide-and-rule to control the rural sector. Turits (2003, pp. 82-83, 95) describes this as follows: "in exchange for land access and state assistance, peasants were compelled to farm in a more sedentary, intensive and land efficient manner... The dual nature of the Trujillo state's *protección*, or support, of the peasantry was evident in the severe methods it used to augment peasant production. The state distributed rewards to those it deemed 'man of work' by variously providing

them with land, irrigation, tools, seeds, credit, and technical assistance, while it harshly punished with vagrant penalties (jail and forced labor) and withdrawal of usufruct rights those it considered to be idle... The distribution of lands under Trujillo was represented as a gift more than a right and thus served to dramatize the dictator's personal power." Most notably, Turits (2003, p. 113) explains:[11] "the state's mediation of peasants' access to land fostered a high level of political control. All individuals who wished to obtain land had to supply a certificate of 'good conduct' from the neighborhood authority... Certainly anyone suspected of political disloyalty ... would be excluded."

The divide-and-rule strategy was facilitated by the extraordinary control that Trujillo accumulated over the economy. According to Wiarda (1968, pp. 87, 90-91): "Trujillo could hire and fire whom he pleased when he pleased. Since the great majority of the population was absolutely dependent on him for day-to-day existence, his control over it was assured ... there was so little economic independence that even a bare minimum of political independence was impossible... Trujillo frequently employed his economic power to destroy his political opponents. Banks could and did ... refuse loans and foreclose mortgages; government agencies refused export or import permits ... electricity or phone services were interrupted; and streets and sidewalks infront of selected business establishments were torn up."

As with divide-and-rule in the Congo, one effect was to destroy the efficiency of much of the state machinery. Turits (2003, p. 140) notes: "confusion within the state was an almost inevitable by-product of Trujillo's system of continually circulating high-level functionaries into different positions almost every year for the purposes of maintaining his control." Nevertheless, economic performance under Trujillo was not as bad as under Mobutu. Though there appears to be no reliable national account data for this period, the scholarly consensus appears to be that the Dominican Republic experienced some growth during Trujillo's rule.

What facilitated divide-and-rule in the Dominican Republic? Unlike the Congo, not all the factors suggested by our model fit the Dominican experience. For example, though the country has very rich agricultural lands, it does not have large quantities of minerals, oil, or other natural resources. Also the Trujillo regime took place in a period before the existence of the IMF, World Bank and much international development assistance, so this cannot have played an important role in sustaining the regime. Although the United States was generally friendly to the regime, it did not provide great quantities

[11] Turits (2003) interestingly claims that despite the manipulative nature of the relationship between Trujillo and the peasantry, the fact that Trujillo did actually give peasants access to land created quite a large degree of support for his regime.

of financial assistance. However, two factors clearly are important. When Trujillo took power in 1930 the Dominican Republic was a very poor country and this made it relatively feasible for Trujillo to buy off support. Moreover, although the country is not ethnically heterogeneous in the way the Congo is, the impact of the 19th century Haitian occupation and the United States military intervention, meant that there was no organized traditional elite to counterbalance Trujillo's rise to power and kleptocratic tendencies.

3 A Model

We now outline a simple model to formalize the ideas discussed above, and to illustrate how, in weakly-institutionalized societies, a kleptocratic regime sustained by a divide-and-ruled strategy can emerge. Our purpose is not generality, but to construct a simple framework, which can be used to derive new comparative static results on the incidence and sustainability of kleptocratic regimes.

3.1 The Environment

We consider a small open economy (alternatively, an economy with linear technology) producing three goods: a natural resource, Z, and two goods, q_1 and q_2. We normalize the prices of all goods to 1, which is without loss of any generality, since we will allow differences in the technology of production of the two goods. To start with, we focus on the case where the production of the natural resource good Z_t is constant in all periods,

$$Z_t = Z.$$

Natural resources create rents in this economy, which, in turn, affect political equilibria. We assume that the natural resource rents accrue to the government, and can then be distributed to the producers or consumed by the ruler.

There are two (large) groups of agents, n_1 that produce q_1 and n_2 that produce q_2. We normalize $n_1 = n_2 = 1$. Both groups have utility at time t given by:

$$\sum_{s=t}^{\infty} \beta^s u_{is}(y_{is}, l_{is}) = \sum_{s=t}^{\infty} \beta^s \left(y_{is} - \frac{\eta}{1+\eta} l_{is}^{\frac{1+\eta}{\eta}} \right) \tag{1}$$

where $\beta < 1$ is the discount factor, y_{it} denotes their after-tax income, and l_{it} is labor supply at time t. This specification implies that labor is supplied with elasticity $\eta > 0$.

For each producer of group i, the production technology is:

$$q_{it} = \omega_i l_{it}, \tag{2}$$

where ω_i is the productivity of group $i = 1, 2$. Without loss of generality, we assume that group 1 is more productive, i.e., $\omega_1 \geq \omega_2$. To parametrize the degree of inequality between the two groups, we denote:

$$\omega_1 = \overline{\omega}(1 + x) \text{ and } \omega_2 = \overline{\omega}(1 - x), \tag{3}$$

where, by construction, $\overline{\omega}$ is the average productivity of the economy, and $x \in [0, 1]$. A greater x corresponds to greater inequality between the two groups.

The only redistributive tools in the economy are a linear income tax that is potentially specific to each group, and group-specific lump-sum transfers. The option to use group-specific taxes and transfers are important for the results, and plausible in the context of African societies, where there are clear geographic and ethnic distinctions between producer groups.[12] The post-tax income of the two groups are

$$y_{it} = (1 - \tau_{it})\, \omega_i l_{it} + T_{it}, \tag{4}$$

where $\tau_{it} \in [0, 1]$ is the income tax imposed on group i at time t and $T_{it} \in [0, \infty)$ is a (non-negative) lump-sum transfer to group i.

In each period, each producer maximizes his utility function (1) taking the tax rate τ_{it} as given. This implies a labor supply function:

$$l_{it}(\tau_{it}) = [(1 - \tau_{it})\, \omega_i]^{\eta}. \tag{5}$$

This equation relates labor supply, and therefore output, to taxes, and illustrates the distortionary effects of taxation: greater taxes reduce labor supply and output.

Using (5), the instantaneous indirect utility of a representative agent in group i is found to be:

$$U_i(\tau_{it}, T_{it}) = \frac{1}{1+\eta} [\omega_i (1 - \tau_{it})]^{1+\eta} + T_{it}, \tag{6}$$

and tax revenues are:

$$R(\tau_{1t}, \tau_{2t}) = \tau_{1t} q_{1t} + \tau_{2t} q_{2t} = \tau_{1t}\ (1 - \tau_{1t})^{\eta}\ \omega_1{}^{1+\eta} + \tau_{2t}\ (1 - \tau_{2t})^{\eta}\ \omega_2{}^{1+\eta}. \tag{7}$$

The government budget constraint is

$$T_{1t} + T_{2t} + C_{Kt} \leq R(\tau_{1t}, \tau_{2t}) + Z + F_t, \tag{8}$$

[12] In practice, differential taxes also include indirect taxes levied on the producer and consumer groups, as well as the use of marketing boards to manipulate agricultural prices, a frequently-used policy in many African countries (see Bates, 1981).

where $C_{Kt} \in [0, \infty)$ is the consumption of the (kleptocratic) ruler, $R(\tau_{1t}, \tau_{2t})$ is tax revenue given by (7), and $F_t \in [0, \infty)$ is foreign aid, if any. The ruler is assumed to have the utility function at time t:

$$\sum_{s=t}^{\infty} \beta_K^s C_{Ks},$$

where $\beta_K < 1$ is the discount factor of the ruler, which could differ from those of the citizens.

The political system is either "dictatorship" (controlled by the ruler), K, or democracy, D. Our focus is whether dictatorship can survive and to what extent it will be "kleptocratic" (i.e., to what extent the ruler will be able to tax producers for his own consumption, while ensuring the survival of the dictatorship). To focus on this question, we model democracy in the simplest possible way, and assume that in democracy the two producer groups are in power jointly, thus they set zero taxes, and share the natural resource rents and foreign aid equally (and therefore, set $C_{Kt} = 0$).[13]

In what follows, we assume that only the ruler receives foreign aid (i.e., there is no foreign aid in democracy). More formally, denoting the political state by S_{t-1}, we have $F_t = 0$ if $S_{t-1} = D$ and $F_t = F$ if $S_{t-1} = K$. This assumption is not as extreme as it appears, since any part of foreign aid that is perpetual can be included in the natural resource rents, Z, and therefore, F_t can be interpreted as the additional portion of foreign aid that the ruler receives because under his rule there is more poverty or famine, or because the ruler pursues a foreign policy in line with the donors' interests. Moreover, if a democracy will receive more foreign aid than the ruler, we can allow this by letting $F < 0$. Finally, we can interpret F as the fungible part of foreign aid. In this case, even if foreign aid will continue after democracy it will be allocated to some specific purposes such as poverty reduction or education for disadvantaged groups. In this case in democracy the two producer groups will not have access to aid, and this situation is equivalent to the one here with $F_t = 0$ when $S_{t-1} = D$.

Given this assumption, the instantaneous utilities of the two groups in democracy are:

$$U_i^D = \frac{\omega_i^{1+\eta}}{1+\eta} + \frac{Z}{2}. \tag{9}$$

In contrast, in kleptocracy, the ruler will maximize his consumption, subject to the constraint that he keeps power (alternatively, he can be removed from power, and in this

[13]This formulation of policies in democracy is adopted to simplify the discussion, and the results are robust to more realistic models of decision-making in democracy, as long as democracy is more attractive for both producer groups than the kleptocratic regime. For example, we could allow the two groups to be of different sizes, and the larger group to impose limited redistributive taxes on the smaller group.

case, democracy will result, and $C_{Kt} = 0$ for all future periods). Before describing the constraints facing the ruler in detail, let us write the "unconstrained" solution. This is given by maximizing $R(\tau_{1t}, \tau_{2t})$, which is achieved at the tax rates:

$$\tau_{1t}^* = \tau_{2t}^* = \tau^* \equiv \frac{1}{1+\eta}, \tag{10}$$

and paying 0 transfers, i.e., $T_{it}^* = 0$, thus setting $C_{Kt} = R(\tau^*, \tau^*) + Z + F$. The instantaneous utilities of the two groups under these tax rates are given by:

$$U_i^* = U_i\left(\tau_{it} = \tau^*, T_{it} = 0\right) = \frac{\omega_i^{1+\eta}}{1+\eta}\left(\frac{\eta}{1+\eta}\right)^{1+\eta}. \tag{11}$$

3.2 The Political Game and Definition of Equilibrium

The timing of events in the political game are as follows. In each period, t, society inherits a political state, either $S_{t-1} = D$ or $S_{t-1} = K$. $S_{t-1} = D$ is an absorbing state, so if the economy ever becomes a democracy, it remains so forever. If $S_{t-1} = D$, the two producer groups play the simple game described above, denoted by $\Gamma_t(D)$ for convenience, where they set the taxes and share the natural resources rents equally. If society is a dictatorship, i.e., $S_{t-1} = K$, then the following game, $\Gamma_t(K)$, is played:

1. The ruler announces tax rates (τ_{1t}, τ_{2t}) and transfers (T_{1t}, T_{2t}).

2. Each group i decides whether to make a proposal to remove the ruler from power. $p_{it} = 1$ denotes that group i has made a proposal and $p_{it} = 0$ denotes otherwise (if both groups simultaneously choose to make a proposal, one of them is chosen randomly to have $p_{it} = 1$ and the other one has $p_{it} = 0$). If one of the two groups makes a proposal to replace the ruler, we denote this by $P_t = 1$, with $P_t = 0$ otherwise.

3. If $P_t = 0$, then $(\tau_{1t}, \tau_{2t}, T_{1t}, T_{2t})$ is implemented and the political system remains at $S_t = K$.

4. If $P_t = 1$, i.e., if $p_{jt} = 1$ for one of the groups, then: the ruler makes a new offer of taxes and transfers, $(\tau_{1t}^r, \tau_{2t}^r, T_{1t}^r, T_{2t}^r)$ such that this policy vector satisfies the government budget constraint, (8). Group $i \neq j$ then responds to the proposal of "proposer" group j and the ruler's new policy vector. If the "proposed", group i, chooses $d_{it} = 1$, the ruler is replaced and there is a switch to democracy, i.e., $S_t = D$. If $d_{it} = 0$, the political system remains at $S_t = K$, and $(\tau_{1t}^r, \tau_{2t}^r, T_{1t}^r, T_{2t}^r)$ is implemented.

5. Given the policy vector, either $(\tau_{1t}, \tau_{2t}, T_{1t}, T_{2t})$ or $(\tau_{1t}^r, \tau_{2t}^r, T_{1t}^r, T_{2t}^r)$, individuals in both groups choose labor supply.

6. Output is produced, tax revenues are collected and consumption takes place.

7. If $P_t = 1$ and the proposed group plays $d_{it} = 1$, then in the next period the stage game switches to $\Gamma_{t+1}(D)$, and otherwise it is $\Gamma_{t+1}(K)$.

There are a number of noteworthy features: first, we assume that all individuals within a producer group act in cohesion in the political game. This is a natural assumption here, since there are no costs of political action, and all agents within a group have the same preferences, so there is no free-rider problem. Second, there is a specific (political) structure built in the timing of the political game: the ruler can only be replaced if the two groups agree to replace him. This assumption captures the fact that in weakly-institutionalized societies, those controlling the state may have considerable power, and cannot be easily removed from office by one of the social groups alone.[14] An alternative political game, where the party in power needs to receive support from all social groups or compete against potential rivals, would correspond to "political institutions" placing checks on politicians. However, such strong political institutions are absent in a number of less developed countries. In these weakly-institutionalized polities, the implied power of the ruler, combined with the fact that after the proposal to remove him from power he can offer a different policy vector, gives him the opportunity to use a "divide-and-rule" strategy, which will be the focus of our analysis.

To simplify the analysis, we will focus on the (pure strategy) Markov Perfect Equilibria (MPE) of the above game (though this restriction is not important for the results). An MPE is a mapping from the current state of the game (and from the actions taken previously in the same stage game) to strategies. Here, the only state variable is S_{t-1}, which denotes whether the political state is either democracy or dictatorship.

3.3 Analysis

The MPE will be characterized by backward induction. When $S_{t-1} = D$, there are no interesting actions, and the ruler receives zero utility, while the two groups receive lifetime utilities of:

$$V_i^D = \frac{U_i^D}{1-\beta}, \tag{12}$$

with U_i^D given by (9). Note also that V_i^D given by (12) is what the proposed group will receive if it chooses $d_{it} = 1$ and removes the ruler from power.

On the other hand, if, in response to the reaction of the ruler (τ_{it}^r, T_{it}^r),[15] the proposed

[14] In addition, in some countries the ethnic and social divisions enabling different taxes and transfers on distinct groups may be absent, thus also undermining the logic of the divide-and-rule strategy.

[15] The reaction of the ruler is the vector $(\tau_{1t}^r, \tau_{2t}^r, T_{1t}^r, T_{2t}^r)$, but since only the component (τ_{it}^r, T_{it}^r) is relevant for group i, we will use this lower-dimensional vector to simplify notation.

group chooses $d_{it} = 0$, its members will receive

$$V_i^C\left(\tau_{it}^r, T_{it}^r \mid \tau_i^e, T_i^e\right) = U_i\left(\tau_{it}^r, T_{it}^r\right) + \frac{\beta U_i(\tau_i^e, T_i^e)}{1-\beta}, \tag{13}$$

where U_i is given by (6) and (τ_i^e, T_i^e) is the MPE tax transfer combination that applies to this group. The reasoning for this expression is that in this period, the proposed group receives (τ_{it}^r, T_{it}^r), and the kleptocrat remains in power, so in the future, the play goes back to the equilibrium policy of (τ_i^e, T_i^e).[16]

In addition, the response of the ruler must satisfy the government budget constraint:

$$T_{1t}^r + T_{2t}^r \leq R(\tau_{1t}^r, \tau_{2t}^r) + Z + F. \tag{14}$$

The "divide-and-rule" strategy will be successful and the ruler will keep power only if

$$V_i^C\left(\tau_{it}^r, T_{it}^r \mid \tau_i^e, T_i^e\right) \geq V_i^D. \tag{15}$$

It is useful to distinguish two cases:

1. The ruler will be able to maintain power, with the equilibrium strategy of $\tau_{it}^e = \tau^* \equiv 1/(1+\eta)$ as given by (10) and $T_{it}^e = 0$ for $i = 1, 2$ and for all t. We denote the set of parameters such that this happens by Σ^*, i.e., if $\sigma' = (\eta, \beta, Z, F, \bar{\omega}, x) \in \Sigma^*$, then $(\tau_{1t}^e, \tau_{2t}^e, T_{1t}^e, T_{2t}^e) = (\tau^*, \tau^*, 0, 0)$.

2. The ruler will not be able to maintain power if he set $(\tau^*, \tau^*, 0, 0)$, thus $\sigma' \notin \Sigma^*$. As we will see below, in this case, the ruler can reduce taxes and increase transfers so as to maintain power. We will also see that in this case $(\tau_1^e, \tau_2^e) < (\tau^*, \tau^*)$, that is, the ruler will necessarily be forced to reduce taxes, and policy will be less distortionary.

To characterize Σ^*, let us start with the subgame in which group j has proposed to replace the ruler, and denote the policies initially chosen by the ruler by $(\tau_{1t}^e, \tau_{2t}^e, T_{1t}^e, T_{2t}^e)$. If the ruler responds with (τ_{it}^r, T_{it}^r) for $i \neq j$ such that $V_i^C\left(\tau_{it}^r, T_{it}^r \mid \tau_i^e, T_i^e\right) < V_i^D$, then he will be replaced. This shows that the ruler must ensure (15).

To analyze how, and when, the ruler can do so, let us first define

$$V_i^C\left[\tau_i^e, T_i^e\right] = \max_{\tau_{1t}^r, \tau_{2t}^r, T_{1t}^r, T_{2t}^r} V_i^C\left(\tau_{it}^r, T_{it}^r \mid \tau_i^e, T_i^e\right) \tag{16}$$

subject to (14). If $V_i^C\left[\tau_i^e, T_i^e\right] < V_i^D$ for $i = 1$ or 2, then group $j \neq i$, anticipating that its proposal will be accepted, will propose to replace the ruler, and the ruler will be deposed.

[16] Since the deviation does not affect any payoff-relevant variable in the continuation game, the MPE involves return to the same strategy, and since we are focusing on pure strategy equilibria, this is simply (τ_i^e, T_i^e).

Therefore, the ruler must guarantee that $V_i^C[\tau_i^e, T_i^e] \geq V_i^D$ for $i = 1$ and 2 to remain in power.

Consequently, we first need to find $V_i^C[\tau_i^e, T_i^e]$, the maximum utility that the ruler can give to the proposed group off the equilibrium path. To do this, we need to maximize (16) subject (14). Straightforward differentiation establishes that

$$\tau_i^r = 0 \text{ and } \tau_j^r = \frac{1}{1+\eta}.$$

Therefore, in fighting off a challenge from group j, the ruler will set the revenue-maximizing tax rate on this group, and set zero taxes on the proposed group i. In addition, the ruler will clearly give the minimum possible amount to the proposer group, thus $T_j^r = 0$. Then the government budget constraint, (8), implies:

$$T_i^r = R(\tau_i^r, \tau_j^r) + Z + F.$$

Using these expressions, we can derive the maximum off-the-equilibrium-path payoff of the proposed group, as a function of the MPE policy vector $(\tau_{1t}^e, \tau_{2t}^e, T_{1t}^e, T_{2t}^e)$. This is

$$V_i^C[\tau_i^e, T_i^e] = \frac{\omega_i^{1+\eta}}{1+\eta} + \frac{\omega_j^{1+\eta}}{1+\eta}\left(\frac{\eta}{1+\eta}\right)^{\eta} + Z + F + \frac{\beta U_i(\tau_i^e, T_i^e)}{1-\beta}. \tag{17}$$

This expression is the maximum utility that the ruler can give to group i, following a proposal by group j, as a function of the equilibrium tax and transfer rates on group i.

Given this analysis, the problem of finding the MPE is equivalent to finding a solution to the following maximization problem of the ruler:

$$\max_{\tau_{1t}^e, \tau_{2t}^e, T_{1t}^e, T_{2t}^e} \frac{1}{1-\beta_K}[R(\tau_1^e, \tau_2^e) + Z + F] \tag{18}$$

subject the constraint set:

$$V_i^C[\tau_i^e, T_i^e] \geq V_i^D \text{ for } i = 1, 2. \tag{19}$$

We now characterize the solution to this constrained maximization problem. First, notice that combining (11), (12) and (17), the constraint set, (19), can be rewritten as:

$$\frac{\omega_i^{1+\eta}}{1+\eta} + \frac{\omega_j^{1+\eta}}{1+\eta}\left(\frac{\eta}{1+\eta}\right)^{\eta} + Z + F + \frac{\beta}{1-\beta}\left(\frac{1}{1+\eta}[\omega_i(1-\tau_i)]^{1+\eta} + T_i\right) \geq \frac{1}{1-\beta}\left(\frac{\omega_i^{1+\eta}}{1+\eta} + \frac{Z}{2}\right), \tag{20}$$

for $i = 1, 2$ and $j \neq i$. Then exploiting the fact that $\omega_1 = \overline{\omega}(1+x)$ and $\omega_2 = \overline{\omega}(1-x)$, we can write the constraint set as

$$\Psi(\tau_1, T_1, x) \geq Z\left(\beta - \frac{1}{2}\right) - (1-\beta)F, \text{ and} \tag{21}$$

$$\Psi(\tau_2, T_2, -x) \geq Z\left(\beta - \frac{1}{2}\right) - (1-\beta)\, F, \tag{22}$$

where

$$\Psi(\tau, T, x) \equiv \frac{(1-\beta)\,\overline{\omega}^{1+\eta}\,(1-x)^{1+\eta}}{1+\eta}\left(\frac{\eta}{1+\eta}\right)^{\eta} - \frac{\beta\,\overline{\omega}^{1+\eta}\,(1+x)^{1+\eta}}{1+\eta}\left(1-(1-\tau)^{1+\eta}\right) + \beta T. \tag{23}$$

Moreover, in the case where there is no inequality between the two groups, i.e., when $x = 0$, the constraint set is simply:

$$\Psi(\tau_i, T_i) \equiv \Psi(\tau_i, T_i, x = 0) \geq Z\left(\beta - \frac{1}{2}\right) - (1-\beta)\, F. \tag{24}$$

It is already possible to see why the divide-and-rule strategy can arise in equilibrium. The constraint set, characterized by (21) and (22), will be satisfied when, off-the-equilibrium path, the ruler can shift enough resources to the proposed group. In other words, a very inefficient set of policies can be supported when each group knows that if it proposes to replace the ruler, the ruler will bribe the other group successfully and remain in power. Recognizing this off-the-equilibrium path threat, no group will challenge the ruler, who will then be able to pursue kleptocratic policies along the equilibrium path.

3.4 Equilibrium Without Inequality

Let us start with the case in which $x = 0$ and there is no inequality between the two groups. First, note that whenever he can, the ruler would like to set the tax rates that maximize (18), i.e., $(\tau_{1t}^e, \tau_{2t}^e, T_{1t}^e, T_{2t}^e) = (\tau^*, \tau^*, 0, 0)$. Therefore, the first step is to characterize the set of parameters Σ^* such that these best tax rates (from the point of view of the kleptocratic ruler) can be supported as equilibria. Using (24) and substituting $(\tau_{1t}^e, \tau_{2t}^e, T_{1t}^e, T_{2t}^e) = (\tau^*, \tau^*, 0, 0)$, we immediately obtain the set Σ^* as the set of parameters such that $\Psi\left(\frac{1}{1+\eta}, 0\right) \geq Z\left(\beta - \frac{1}{2}\right) - (1-\beta)\, F$, or more explicitly:

$$\Sigma^* = \left\{\sigma = (\eta, \beta, Z, F, \overline{\omega}) : \frac{\overline{\omega}^{1+\eta}}{1+\eta}\left(\frac{\eta}{1+\eta}\right)^{\eta} - \frac{\beta\,\overline{\omega}^{1+\eta}}{1+\eta} \geq Z\left(\beta - \frac{1}{2}\right) - (1-\beta)\, F\right\}. \tag{25}$$

If $\sigma = (\eta, \beta, Z, F, \overline{\omega}) \in \Sigma^*$, then the MPE involves $(\tau_{1t}^e, \tau_{2t}^e, T_{1t}^e, T_{2t}^e) = (\tau^*, \tau^*, 0, 0)$. What happens if $\sigma \notin \Sigma^*$. Then, $(\tau_{1t}^e, \tau_{2t}^e, T_{1t}^e, T_{2t}^e) = (\tau^e, \tau^e, T^e, T^e)$ will be chosen such that $\Psi(\tau^e, T^e) = Z\left(\beta - \frac{1}{2}\right) - (1-\beta)\, F$ (given the symmetry between the two groups, the ruler will choose the same taxes and transfers for both groups). Moreover, inspection of (23) establishes that as long as $\Psi(\hat{\tau}, T = 0) = Z\left(\beta - \frac{1}{2}\right) - (1-\beta)\, F$ for some $\hat{\tau} \in [0, \tau^*]$, the ruler will reduce taxes to $\hat{\tau}$ and sets 0 lump-sum transfers (this is intuitive, since taxes are

distortionary). The important point to note is that the ruler can always satisfy (25), and therefore remain in power.[17] This highlights the importance of the underlying political institutions in this context: by allowing the ruler to use divide-and-rule, the current set of political institutions make sure that he always remains in power. Nevertheless, the extent to which he can transfer rents to himself and distort the allocation of resources will depend on parameter values as we will see below.

This discussion establishes the following proposition:

Proposition 1 Let Σ^* be given by (25). Then we have:

1. When $\sigma \in \Sigma^*$, then the unique MPE is an *unconstrained kleptocratic regime* where $(\tau^e_{1t}, \tau^e_{2t}, T^e_{1t}, T^e_{2t}) = (\tau^*, \tau^*, 0, 0)$ for all t and $i = 1, 2$.

2. When $\sigma \notin \Sigma^*$, then the unique MPE is a *constrained kleptocratic regime* where the equilibrium policies are $(\tau^e_{1t}, \tau^e_{2t}, T^e_{1t}, T^e_{2t}) = (\hat{\tau}, \hat{\tau}, 0, 0)$ if

$$\Psi(\hat{\tau}, T = 0) = Z\left(\beta - \frac{1}{2}\right) - (1 - \beta) F, \tag{26}$$

for some $\hat{\tau} \in [0, \tau^*]$, and $(\tau^e_{1t}, \tau^e_{2t}, T^e_{1t}, T^e_{2t}) = (0, 0, \hat{T}, \hat{T})$ where $\Psi(\tau = 0, \hat{T}) = Z\left(\beta - \frac{1}{2}\right) - (1 - \beta) F$ otherwise.

In both cases, a challenge from group j, i.e., $p_{jt} = 1$, is met by $(\tau^r_{jt}, T^r_{jt}) = (\tau^*, 0)$ and (τ^r_{it}, T^r_{it}) for $i \neq j$ such that $V_i^C(\tau^r_{it}, T^r_{it} \mid \tau^e_i, T^e_i) = V_i^D$ where $V_i^C(\tau^r_{it}, T^r_{it} \mid \tau^e_i, T^e_i)$ is given by (13) and V_i^D is given by (12).

The discussion above establishes this proposition. The only part that may need more comment is the uniqueness of equilibrium. Recall that if group j makes a proposal to remove the ruler from power, the ruler will respond with $\tau^r_{jt} = \tau^*$, and when $\sigma \in \Sigma^*$, we also have $\tau^e_{jt} = \tau^*$. It may therefore appear that we can construct equilibria where there are challenges along the equilibrium path when $\sigma \in \Sigma^*$, and thus the equilibrium described in part 1 of Proposition 1 is not unique. This is not the case, however. Any

[17] To see this, suppose that for some parameter values, the kleptocrat is removed from power. Then it must be the case that $V_i^C[\tau^e_i, T^e_i] < V_i^D$ for $i = 1$ or 2. But in this case, it is credible for the kleptocrat to reduce τ^e_i and increase T^e_i, and by construction, $V_i^C[\tau^e_i = 0, T^e_i = Z/2] > V_i^D$, providing a contradiction and establishing that the kleptocrat will not be removed from power along the equilibrium path. This argument would not necessarily work when $F < 0$, however.

In a more general set up with stochastic productivity or costs of removing the ruler, there would also be parameter values for which dictatorship cannot survive, similar to, and for the same reasons as, the models of transition to democracy in Acemoglu and Robinson (2000b, 2004).

combination of strategies where $p_{jt} = 1$ cannot be an equilibrium. If it were, a deviation to $\left(\tau^e_{jt}, T^e_{jt}\right) = (\tau^*, \varepsilon)$ for $\varepsilon > 0$ would be a best response for the ruler, and the strategy of $p_{jt} = 1$ would then cost group j an amount $\varepsilon > 0$. Since a smaller ε is always preferred by the ruler, the only combination of best response strategies is when $\varepsilon \to 0$, which is the one described in the proposition.

This proposition therefore formalizes how the ruler remains in power and is able to transfer resources to himself thanks to the divide-and-rule strategy. He achieves this as follows: when threatened by the "proposer" group, he can always gain the allegiance of the other, "proposed" group, by shifting resources to them. Because the proposed group is pivotal, the ruler can remain in power if he can successfully buy off the proposed group. If this is the case, anticipating this outcome, neither group will attempt to remove the ruler from power, and he will be able to establish a kleptocratic regime transferring resources to himself at the expense of the productive groups in society.

The proposition also highlights the notion of "constrained kleptocratic regime," where the ruler is able to pursue kleptocratic policies transferring resources to himself, but in this endeavor he is constrained by the threat that the two groups will coordinate and remove him from power. To avoid this possibility, the ruler reduces the equilibrium taxes (or sometimes sets 0 taxes and makes positive transfers) to the two groups.

Notice that when $\sigma \in \Sigma^*$, the equilibrium does not feature the notion of "punishment", which was discussed in the introduction. According to this notion, kleptocrats are in power because they can threaten to punish challengers and reward loyal groups. In this case, both on and off the equilibrium path, the group that challenges the ruler is taxed at the rate τ^* and receives 0 transfers. In contrast, when $\sigma \notin \Sigma^*$, $\tau^e_j < \tau^*$, and if group j challenges the ruler, not only will group $i \neq j$ be bribed to cooperate with the ruler, but also group j will be punished with the tax increased to τ^*.

Next we turn to a discussion of a number of natural comparative statics in this model. Most of those are immediate from the inspection of (25) and (26):

1. Greater F makes $\sigma \in \Sigma^*$ more likely, and when $\sigma \notin \Sigma^*$, greater F increases taxes.

This comparative static is intuitive: greater F, i.e., greater foreign aid, relaxes the budget constraint of the ruler and provides him with more resources to buy off the pivotal group off the equilibrium path. Therefore, greater F makes the kleptocratic regime easier to sustain. This comparative static result suggests that the foreign aid given to many African regimes by the United States and the United Nations during the Cold War period may have had the unforeseen consequence of consolidating kleptocratic regimes. As we discussed in the introduction, this comparative static result may help us understand why in

the postwar period, foreign aid appears to have had no positive effect on economic growth on average, and in fact, it may have had a negative effect on the economic outcomes in certain non-democratic countries.

2. Greater β makes $\sigma \in \Sigma^*$ less likely, and when $\sigma \notin \Sigma^*$, greater β reduces taxes.

Greater β means that both groups are more patient. Since the benefit of replacing the ruler—greater returns in democracy—accrues in the future, greater patience makes it less likely that the ruler will be able to maintain his kleptocratic regime. This comparative static suggests that kleptocratic regimes are more likely to emerge in societies where citizens or their political representatives value the future less.

3. If $\beta < 1/2$, then greater Z makes $\sigma \in \Sigma^*$ more likely, and when $\sigma \notin \Sigma^*$, it increases taxes. If $\beta > 1/2$, the opposite comparative statics apply.

Inspection of (25) shows that greater natural resource rents create two opposing forces. First, like foreign aid, greater Z relaxes the budget constraint of the ruler, and enables him to sustain his kleptocratic regime by buying off pivotal groups when challenged. Second, greater Z increases the value of democracy. When $\beta < 1/2$, the two groups are sufficiently short-sighted that the first effect dominates. When $\beta > 1/2$, the second effect dominates. The reason why the relevant threshold is $1/2$ is that in democracy natural resource rents will be divided between the two groups, whereas off the equilibrium path, the ruler can pay all the rents to the proposed group. Casual empiricism suggests that the case with $\beta < 1/2$ appears more relevant here, and suggests that natural-resource-rich countries may be more prone to kleptocratic regimes.[18] In fact, the comparative static that greater rents from natural resources make kleptocracy more likely (i.e., the case with $\beta < 1/2$) may help us explain why kleptocratic and neopatrimonial regimes have often emerged in resource-rich countries, such as the Democratic Republic of the Congo (Zaire), Sierra Leone, Liberia, and Nigeria.

4. If $\beta > (\eta / (1+\eta))^{\eta}$, then greater ϖ makes $\sigma \in \Sigma^*$ less likely, and when $\sigma \notin \Sigma^*$, it reduces taxes. If $\beta < (\eta / (1+\eta))^{\eta}$, the opposite comparative statics apply.

This result can be obtained by differentiating (25). The intuition for the result may be better understood by considering condition (20), which separately shows the effect of the productivity of the proposed and the proposer groups. Higher productivity of the proposed group, ω_i, makes the condition less likely to hold (and kleptocracy more likely to survive), because the proposed group has more to gain from democracy. On the other hand, a greater level of productivity of the proposer group, ω_j, makes kleptocracy more likely to survive, because it implies greater tax revenues that the ruler can use

[18] The relevant time period here is not a year, so $\beta < 1/2$ may not be unreasonable.

to bribe the proposed group. Consequently, higher average productivity $\overline{\omega}$ creates two opposing forces. When the discount factor β is sufficiently large, i.e., $\beta > (\eta/(1+\eta))^{\eta}$, the own effect dominates and greater productivity makes kleptocracy less likely.[19] This comparative static suggests that, as long as β is not very low, societies that are otherwise less productive are also more likely to suffer from kleptocratic regimes and distortionary policies of rulers.

3.5 Equilibrium With Inequality

Let us now return to the case where the two groups do not necessarily have the same productivity, i.e., $x \in (0,1]$. First, recall that despite the differences in productivity between the two groups, the analysis in subsection 3.3 above established that the most preferred (unconstrained) policy for the ruler is still $(\tau^e_{1t}, \tau^e_{2t}, T^e_{1t}, T^e_{2t}) = (\tau^*, \tau^*, 0, 0)$. The question is when this policy vector will be possible for the ruler.

To answer this question, recall that $\sigma' = (\overline{\omega}, \eta, \beta, Z, F, x)$ is the vector of parameters, and let Σ_1 the the set of parameters such that $\Psi(\tau^*, T=0, x) \geq Z\left(\beta - \frac{1}{2}\right) - (1-\beta)F$ and Σ_2 the set of parameters such that $\Psi(\tau^*, T=0, -x) \geq Z\left(\beta - \frac{1}{2}\right) - (1-\beta)F$. In other words, $\sigma' \in \Sigma_1$ implies that if group 2 makes a proposal to remove the ruler from power, the ruler can make a counteroffer that co-opts group 1 even when along the MPE group 1's members are taxed at the rate τ^* and receive no transfers. Σ_2 is the corresponding set for group 2.

Formally, these two sets are defined by

$$\begin{aligned}\Sigma_1 = & \left\{\sigma' : \frac{(1-\beta)\,\overline{\omega}^{1+\eta}\,(1-x)^{1+\eta}}{1+\eta}\left(\frac{\eta}{1+\eta}\right)^{\eta}\right. \\ & \left. -\frac{\beta\,\overline{\omega}^{1+\eta}\,(1+x)^{1+\eta}}{1+\eta}\left[1-\left(\frac{\eta}{1+\eta}\right)^{1+\eta}\right] \geq Z\left(\beta-\frac{1}{2}\right)-(1-\beta)F\right\}\end{aligned} \tag{27}$$

and

$$\begin{aligned}\Sigma_2 = & \left\{\sigma' : \frac{(1-\beta)\,\overline{\omega}^{1+\eta}\,(1+x)^{1+\eta}}{1+\eta}\left(\frac{\eta}{1+\eta}\right)^{\eta}\right. \\ & \left. -\frac{\beta\,\overline{\omega}^{1+\eta}\,(1-x)^{1+\eta}}{1+\eta}\left[1-\left(\frac{\eta}{1+\eta}\right)^{1+\eta}\right] \geq Z\left(\beta-\frac{1}{2}\right)-(1-\beta)F\right\}.\end{aligned} \tag{28}$$

Since $\Psi(\tau^*, T=0, x)$ is a decreasing function of x, we have that $\Sigma_1 \subset \Sigma_2$. In other words, when the producers in one of the groups become more productive they also become more

[19] It can be verified that $(\eta/(1+\eta))^{\eta}$ is monotonically decreasing in η, with $(\eta/(1+\eta))^{\eta} \to e^{-1} \simeq 0.37$ as $\eta \to \infty$. Therefore, for the set of parameters where greater natural resources rents make kleptocratic policies more likely, while simultaneously greater average productivity make them less likely, we need $\beta \in (0.37, 0.5)$.

willing to oust the ruler. Consequently, the tighter constraint faced by the ruler is to satisfy the more productive group off the equilibrium path. This result reflects the fact that the more productive group has more to gain from democracy, where its members will not be taxed (or more generally, where they will be taxed more lightly). The logic of the political game above therefore implies that, everything else equal, the constraints that the ruler has to worry about is group 2 making an offer and group 1, the more productive group, accepting this proposal.

This observation and a similar analysis to the one in the previous subsection lead to the following proposition:

Proposition 2 Let Σ_1 and Σ_2 be given by (27) and (28). Then we have:

1. When $\sigma' \in \Sigma_1$, then the unique MPE is an *unconstrained kleptocratic regime* where $(\tau^e_{1t}, \tau^e_{2t}, T^e_{1t}, T^e_{2t}) = (\tau^*, \tau^*, 0, 0)$ for all t and $i = 1, 2$.

2. When $\sigma' \notin \Sigma_1$ but $\sigma' \in \Sigma_2$, then the unique MPE is a *partially constrained kleptocratic regime* where the equilibrium policy combination is $(\tau^e_{1t}, \tau^e_{2t}, T^e_{1t}, T^e_{2t}) = (\hat{\tau}_1, \tau^*, \hat{T}_1, 0)$ with
$$\Psi(\hat{\tau}_1, \hat{T}_1, x) = Z\left(\beta - \frac{1}{2}\right) - (1 - \beta)\, F. \tag{29}$$

3. When $\sigma' \notin \Sigma_2$, then the unique MPE is a *fully constrained kleptocratic regime* where $(\tau^e_{1t}, \tau^e_{2t}, T^e_{1t}, T^e_{2t}) = (\hat{\tau}_1, \hat{\tau}_2, \hat{T}_1, \hat{T}_2)$ with
$$\Psi(\hat{\tau}_1, \hat{T}_1, x) = \Psi(\hat{\tau}_2, \hat{T}_2, -x) = Z\left(\beta - \frac{1}{2}\right) - (1 - \beta)\, F. \tag{30}$$

This proposition extends Proposition 1 to a situation with potential heterogeneity in the productivities of the two groups. It also introduces the notion of partially- and fully-constrained kleptocratic regimes: as before, an unconstrained kleptocratic regime pursues the policy most preferred by the ruler. When it is partially constrained, the ruler has to reduce the tax rate on the more productive group, but can tax the less productive group as heavily as he wishes. When the regime is fully constrained, the tax rates on both groups are constrained.

The comparative static results discussed in the previous subsection continue to apply in this extended model. The new result here is with respect to x, the degree of inequality between the two producer groups. A greater x—greater inequality between the producer groups—makes the unconstrained kleptocratic regime less likely (i.e., it makes it less likely that $\sigma' \in \Sigma_1$). Intuitively, the more binding constraint from the point of view of the ruler

is to satisfy the more productive group: when this group becomes even more productive, democracy becomes more attractive for the producers in this group, and therefore, it becomes more difficult for the ruler to buy them off when challenged. This comparative static captures the notion that when there is a strong producer group in society, the ruler has less room to maneuver, and therefore the unconstrained kleptocratic regime is less likely to emerge. Loosely speaking, we can say that a highly productive producer group creates a "balance of power", and this balance between one of the major producer groups and the ruler prevents the most egregious kleptocratic policies. This comparative static result might help us understand why kleptocracies are rare in African countries with powerful producer groups, such as the cattleowners in Botswana or the sugar planters in Mauritius.[20]

4 Concluding Remarks

Most current political economy research focuses on the study of politics in environments where formal political institutions place effective constraints both on politicians and on political strategies. This approach does not seem sufficient to understand the nature of politics in weakly-institutionalized societies such as Liberia, Haiti, the Dominican Republic, or the Democratic Republic of the Congo. In these polities, differences in formal political institutions cannot be the main determinant of differences in policies. For example, even though the Congo had several constitutions during the rule of Mobutu, it appears that this had little impact on his behavior. For example, Gould (1980, p. 63) shows that the 1974 Zairian Constitution put Mobutu: "above the constitution, giving him the right ... to run for president as often as he wishes, to modify the conditions governing elections, to change the number of seats on the Political Bureau [the governing body of Mobutu's political party and effectively of the state], to dismiss as many political commissioners as he would like, and indeed to abrogate the constitution as he sees fit." Indeed, Mpinga Kasenda, a professor of law and subsequently Zairian prime minister noted in 1975 before an audience at the Institut Royal des Relacions Internacionales in Brussels that (quoted in Turner and Young, 1985, p. 70): "Zairians have no need to refer to Montesquieu to determine what form of government they need."

Such a situation is perhaps extreme. Zimbabwe currently has a much more conven-

[20]Note, however, that a different timing of events might lead to the opposite comparative static with respect to inequality. For example, if after the two groups agree, the ruler can make a counteroffer to one of the groups, then he will always choose the "weakest link", the group more likely to agree, which will be the less productive group. In that case, greater inequality may make kleptocracy more likely. We believe that the timing of moves in the political game in the text is more plausible.

tional constitution, written during the Lancaster House negotiations of 1979 with the British government before the end of the Rhodesian state. Nevertheless, it is clear that the Mugabe regime acts in flagrant disregard for the formal structure of the constitution.

Motivated by these observations, and as a first step on the road to building a framework for analysis of weakly-institutionalized polities, we developed a model of how kleptocratic rulers that expropriate the wealth and incomes of their citizens remain in power without a significant base of support in society. The success of kleptocrats rests on their ability to use a particular type of political strategy—"divide-and-rule". Members of society (producer groups) need to cooperate in order to depose a kleptocrat. The kleptocrat may undermine such cooperation, however, by using the tax revenues, the rents from natural resources and the funds from foreign aid to bribe other groups to maintain his position. Thus kleptocrats can intensify the collective action problem by threats which remain off the equilibrium path. In equilibrium, all are exploited and no one challenges the kleptocrat because of the threat of divide-and-rule. We argue that such a model provides a good stylistic description of the behavior of many kleptocratic regimes, including Mobutu Sese Seko in the Democratic Republic of the Congo (Zaire) and Rafael Trujillo in the Dominican Republic.

Our model not only formalizes divide-and-rule, but yields a number of comparative static results useful in thinking about the emergence, longevity and implications of kleptocracy. We showed that foreign aid and rents from natural resources typically help kleptocratic rulers by providing them with greater resources to buy off opponents. Kleptocratic policies are also more likely to arise when producer groups or their political representatives are shortsighted and when the average productivity in the economy is low. Also interestingly, greater inequality between producer groups may constrain kleptocratic policies because more productive groups are more difficult to buy off. We discussed how these comparative static results are useful in interpreting a number of cases of kleptocratic rule.

We view this paper as only a first tentative step towards a systematic analysis of equilibrium politics in weakly-institutionalized polities. To understand the political economy of less developed societies, we need a theory of behavior and change in weakly-institutionalized societies. We developed a simple model to study a specific aspect of political behavior that seems to be endemic in such polities, but did not attempt to analyze how weakly-institutionalized societies may develop their institutions, and what makes a society possess weak institutions in the first place. These are not only important, but also exciting areas for future research.

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